## ABSTRACT OF THE DISCLOSURE

The amount of pancreatic  $\beta$ -cells and/or the function of pancreatic  $\beta$ -cells can be conveniently and accurately analyzed in real time by a, method which comprises analyzing the amount of pancreatic  $\beta$ -cells and/or the function of pancreatic  $\beta$ -cells by using a biological sample having a recombinant expression vector, wherein a reporter gene is bonded under the control by a pancreatic  $\beta$ -cell-specific gene promoter region, transferred thereinto.